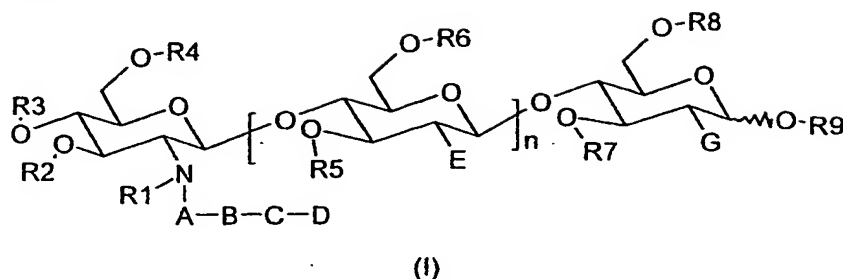


**Claims:**

1. A compound of formula (I)



in which

- ▶  $n$  represents 1, 2 or 3;
  - ▶  $A$  represents a substituent chosen from  $-C(O)-$ ,  $-C(S)-$ ,  $-CH_2-$ ,  $-CHR^{10}-$ ,  $-CR^{10}R^{11}-$ ,  $-C(O)O-$ ,  $-C(O)S-$ ,  $-C(S)O-$ ,  $-C(S)S-$ ,  $-C(O)NH-$ ,  $-C(NH)NH-$  and  $-C(S)NH-$ ;
  - ▶  $B$  represents
    - an arylene;
    - a heteroarylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
    - a naphthylene;
    - a heteronaphthylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
    - a divalent radical derived from 2 fused aromatic rings containing 5 or 6 atoms each;
    - a divalent radical derived from 2 fused aromatic or heteroaromatic rings containing 5 or 6 atoms each and comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
    - a biphenylene;
    - or a heterobiphenylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
- these groups possibly being substituted with one or two substituents  $R^{12}$  and  $R^{13}$  chosen, independently of each other, from halogen,  $CN$ ,  $C(O)OR^{14}$ ,  $C(O)NR^{15}R^{16}$ ,  $CF_3$ ,  $OCF_3$ ,  $-NO_2$ ,  $N_3$ ,  $OR^{14}$ ,  $SR^{14}$ ,  $NR^{15}R^{16}$  and  $C_{1-6}$ -alkyl;
- ▶  $C$  represents a substituent chosen from  $-O-$ ,  $-S-$ ,  $-CH_2-$ ,  $-CHR^{17}-$ ,  $-CR^{17}R^{18}-$ ,  $-NH-$  and  $-NR^{19}-$ ;
  - ▶  $D$  represents a linear or branched, saturated or unsaturated hydrocarbon-based chain containing from 2 to 20 carbon atoms;

► E and G represent, independently of each other, a substituent chosen from H, OH, OR<sup>20</sup>, NH<sub>2</sub> and NHR<sup>20</sup>;

► R<sup>1</sup> represents a substituent chosen from H, C<sub>1-6</sub>-alkyl, C(O)H and C(O)CH<sub>3</sub>;

► R<sup>2</sup>, R<sup>3</sup>, R<sup>6</sup>, R<sup>14</sup>, R<sup>15</sup>, R<sup>16</sup> and R<sup>19</sup> represent, independently of each other, a substituent  
5 chosen from H, C<sub>1-6</sub>-alkyl, C(O)C<sub>1-6</sub>-alkyl, -C(S)C<sub>1-6</sub>-alkyl, -C(O)OC<sub>1-6</sub>-alkyl, -C(O)NH<sub>2</sub>,  
-C(S)NH<sub>2</sub>, -C(NH)NH<sub>2</sub>, -C(O)NHC<sub>1-6</sub>-alkyl, -C(S)NHC<sub>1-6</sub>-alkyl and -C(NH)NHC<sub>1-6</sub>-alkyl;

► R<sup>4</sup> represents a substituent chosen from H, C<sub>1-6</sub>-alkyl and R<sup>21</sup>;

► R<sup>5</sup> represents a substituent chosen from H, C<sub>1-6</sub>-alkyl, fucosyl and R<sup>22</sup>;

► R<sup>7</sup> represents a substituent chosen from H, C<sub>1-6</sub>-alkyl, arabinosyl and R<sup>23</sup>;

► R<sup>8</sup> represents a substituent chosen from H, C<sub>1-6</sub>-alkyl, fucosyl, methylfucosyl,  
10 sulfofucosyl, acetylfucosyl, arabinosyl, SO<sub>3</sub>H, SO<sub>3</sub>Li, SO<sub>3</sub>Na, SO<sub>3</sub>K, SO<sub>3</sub>N(C<sub>1-8</sub>alkyl)<sub>4</sub> and  
R<sup>24</sup>;

► R<sup>9</sup> represents a substituent chosen from H, C<sub>1-6</sub>-alkyl, mannose, glycerol and R<sup>25</sup>;

► R<sup>10</sup>, R<sup>11</sup>, R<sup>17</sup> and R<sup>18</sup> represent, independently of each other, a substituent chosen from  
15 C<sub>1-6</sub>-alkyl and F;

► R<sup>20</sup>, R<sup>21</sup>, R<sup>22</sup>, R<sup>23</sup>, R<sup>24</sup> and R<sup>25</sup> represent, independently of each other, a substituent  
chosen from C(O)C<sub>1-6</sub>-alkyl, -C(S)C<sub>1-6</sub>-alkyl, -C(O)OC<sub>1-6</sub>-alkyl, -C(O)NH<sub>2</sub>, -C(S)NH<sub>2</sub>,  
-C(NH)NH<sub>2</sub>, -C(O)NHC<sub>1-6</sub>-alkyl, -C(S)NHC<sub>1-6</sub>-alkyl and -C(NH)NHC<sub>1-6</sub>-alkyl;

and also the possible geometrical and/or optical isomers, enantiomers and/or diastereoisomers,  
20 tautomers, salts, N-oxides, sulfoxides, sulfones, and metal or metalloid complexes thereof,  
which are agriculturally acceptable, such as lithium, sodium, potassium and tetraalkylammonium  
salts.

2. The compound of formula (I) as claimed in claim 1, having one or other of the following  
25 characteristics, taken separately or in combination:

► n represents 2 or 3;

► A represents -C(O)- or -CH<sub>2</sub>-;

► B represents a phenylene;

► C represents -O-;

► D represents a linear, saturated or unsaturated hydrocarbon-based chain containing  
30 from 3 to 17 carbon atoms;

► E and G represent NHC(O)CH<sub>3</sub>;

► R<sup>1</sup> represents H, CH<sub>3</sub> or C(O)CH<sub>3</sub>;

► R<sup>2</sup>, R<sup>3</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>9</sup> represent H;

► R<sup>4</sup> represents H, C(O)CH<sub>3</sub> or C(O)NH<sub>2</sub>;

► R<sup>8</sup> represents H, SO<sub>3</sub>H, SO<sub>3</sub>Li, SO<sub>3</sub>Na, SO<sub>3</sub>K, SO<sub>3</sub>N(C<sub>1-8</sub>alkyl)<sub>4</sub>, fucosyl or methyl-  
35 fucosyl.

3. The compound of formula (I) as claimed in claim 1 or 2, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- ▶ A represents -C(O)- or -CH<sub>2</sub>-;
- 5 ▶ E and G represent NHC(O)CH<sub>3</sub>;
- ▶ R<sup>1</sup> represents H, CH<sub>3</sub> or C(O)CH<sub>3</sub>;
- ▶ R<sup>2</sup>, R<sup>3</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>9</sup> represent H;
- ▶ R<sup>4</sup> represents H, C(O)CH<sub>3</sub> or C(O)NH<sub>2</sub>;
- ▶ R<sup>8</sup> represents H, SO<sub>3</sub>H, SO<sub>3</sub>Li, SO<sub>3</sub>Na, SO<sub>3</sub>K, SO<sub>3</sub>N(C<sub>1-8</sub>alkyl)<sub>4</sub>, fucosyl or methyl-
- 10 fucosyl.

4. The compound of formula (I) as claimed in any one of claims 1 to 3, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- 15 ▶ A represents -C(O)- or -CH<sub>2</sub>-;
- ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- ▶ E and G represent NHC(O)CH<sub>3</sub>;
- ▶ R<sup>1</sup> represents H, CH<sub>3</sub> or C(O)CH<sub>3</sub>;
- 20 ▶ R<sup>2</sup>, R<sup>3</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>9</sup> represent H;
- ▶ R<sup>4</sup> represents H, C(O)CH<sub>3</sub> or C(O)NH<sub>2</sub>;
- ▶ R<sup>8</sup> represents H, SO<sub>3</sub>H, SO<sub>3</sub>Li, SO<sub>3</sub>Na, SO<sub>3</sub>K, SO<sub>3</sub>N(C<sub>1-8</sub>alkyl)<sub>4</sub>, fucosyl or methyl-
- fucosyl.

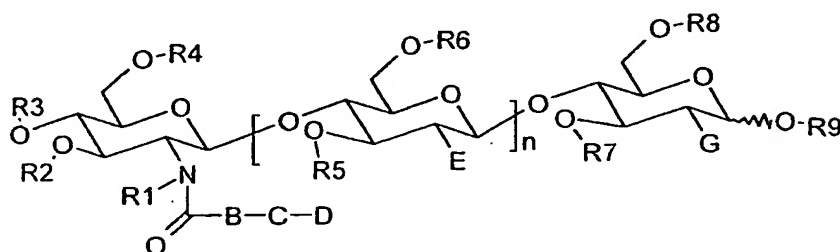
25 5. The compound of formula (I) as claimed in any one of claims 1 to 4, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- ▶ A represents -C(O)- or -CH<sub>2</sub>-;
- ▶ C represents -O-;
- 30 ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- ▶ E and G represent NHC(O)CH<sub>3</sub>;
- ▶ R<sup>1</sup> represents H, CH<sub>3</sub> or C(O)CH<sub>3</sub>;
- ▶ R<sup>2</sup>, R<sup>3</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>9</sup> represent H;
- 35 ▶ R<sup>4</sup> represents H, C(O)CH<sub>3</sub> or C(O)NH<sub>2</sub>;
- ▶ R<sup>8</sup> represents H, SO<sub>3</sub>H, SO<sub>3</sub>Li, SO<sub>3</sub>Na, SO<sub>3</sub>K, SO<sub>3</sub>N(C<sub>1-8</sub>alkyl)<sub>4</sub>, fucosyl or methyl-
- fucosyl.

6. The compound of formula (I) as claimed in any one of claims 1 to 5, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- ▶ A represents -C(O)- or -CH<sub>2</sub>-;
- ▶ B represents a phenylene;
- ▶ C represents -O-;
- ▶ D represents a linear hydrocarbon-based chain containing 11 carbons, which is saturated, or unsaturated between carbons 4 and 5;
- ▶ E and G represent NHC(O)CH<sub>3</sub>;
- ▶ R<sup>1</sup> represents H, CH<sub>3</sub> or C(O)CH<sub>3</sub>;
- ▶ R<sup>2</sup>, R<sup>3</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>9</sup> represent H;
- ▶ R<sup>4</sup> represents H, C(O)CH<sub>3</sub> or C(O)NH<sub>2</sub>;
- ▶ R<sup>8</sup> represents H, SO<sub>3</sub>H, SO<sub>3</sub>Li, SO<sub>3</sub>Na, SO<sub>3</sub>K, SO<sub>3</sub>N(C<sub>1-8</sub>alkyl)<sub>4</sub>, fucosyl or methyl-fucosyl.

7. The compound as claimed in claim 1 and of formula (Ia)



(Ia)

in which

- ▶ n represents 1, 2 or 3,
- ▶ B represents
  - an arylene;
  - a heteroarylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
  - a naphthylene;
  - a heteronaphthylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
  - a divalent radical derived from 2 fused aromatic rings containing 5 or 6 atoms each;
  - a divalent radical derived from 2 fused aromatic or heteroaromatic rings containing 5 or 6 atoms each and comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;

- a biphenylene;
- or a heterobiphenylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;

these groups possibly being substituted with one or two substituents  $R^{12}$  and  $R^{13}$  chosen, independently of each other, from halogen, CN,  $C(O)OR^{14}$ ,  $C(O)NR^{15}R^{16}$ ,  $CF_3$ ,  $OCF_3$ ,  $-NO_2$ ,  $N_3$ ,  $OR^{14}$ ,  $SR^{14}$ ,  $NR^{15}R^{16}$  and  $C_{1-6}$ -alkyl;

► C represents a substituent chosen from  $-O-$ ,  $-S-$ ,  $-CH_2-$ ,  $-CHR^{17}-$ ,  $-CR^{17}R^{18}-$ ,  $-NH-$  or  $-NR^{19}-$ ;

► D represents a linear or branched, saturated or unsaturated hydrocarbon-based chain containing from 2 to 20 carbon atoms;

► E and G represent, independently of each other, a substituent chosen from H, OH,  $OR^{20}$ ,  $NH_2$ ,  $NHR^{20}$ ;

►  $R^1$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl,  $C(O)H$ , and  $C(O)CH_3$ ;

$R^2$ ,  $R^3$ , and  $R^6$  represent, independently of each other, a substituent chosen from H,  $C_{1-6}$ -alkyl,  $C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

►  $R^4$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl or  $R^{21}$ ;

►  $R^5$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, fucosyl or  $R^{22}$ ;

►  $R^7$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, arabinosyl or  $R^{23}$ ;

►  $R^8$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, fucosyl, methylfucosyl, sulfofucosyl, acetylfucosyl, arabinosyl,  $SO_3H$ ,  $SO_3Li$ ,  $SO_3Na$ ,  $SO_3K$ ,  $SO_3N(C_{1-8}alkyl)_4$  or  $R^{24}$ ;

►  $R^9$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, mannose, glycerol or  $R^{25}$ ;

►  $R^{10}$ ,  $R^{11}$ ,  $R^{17}$  and  $R^{18}$  represent, independently of each other, a substituent chosen from  $C_{1-6}$ -alkyl or F;

►  $R^{14}$ ,  $R^{15}$ ,  $R^{16}$  and  $R^{19}$  represent, independently of each other, a substituent chosen from H or  $C_{1-6}$ -alkyl,  $-C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

►  $R^{20}$ ,  $R^{21}$ ,  $R^{22}$ ,  $R^{23}$ ,  $R^{24}$  and  $R^{25}$  represent, independently of each other, a substituent chosen from  $C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

and also the possible geometrical and/or optical isomers, enantiomers and/or diastereoisomers, tautomers, salts, N-oxides, sulfoxides, sulfones, and metal or metalloid complexes thereof, which are agriculturally acceptable. Among the compounds defined above, the most important compounds are the salts, more particularly the lithium, sodium, potassium or tetraalkylammonium salts.

8. The compound of formula (Ia) as claimed in claim 7, having one or other of the following characteristics, taken separately or in combination:

- n represents 2 or 3;

- ▶ B represents a phenylene;
- ▶ C represents -O-;
- ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- 5 ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-  
10 fucosyl.

9. The compound of formula (Ia) as claimed in claim 7 or 8, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- 15 ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-  
20 fucosyl.

10. The compound of formula (Ia) as claimed in any one of claims 7 to 9, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- 25 ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- 30 ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-  
fucosyl.

11. The compound of formula (Ia) as claimed in any one of claims 7 to 10, simultaneously having the following characteristics:

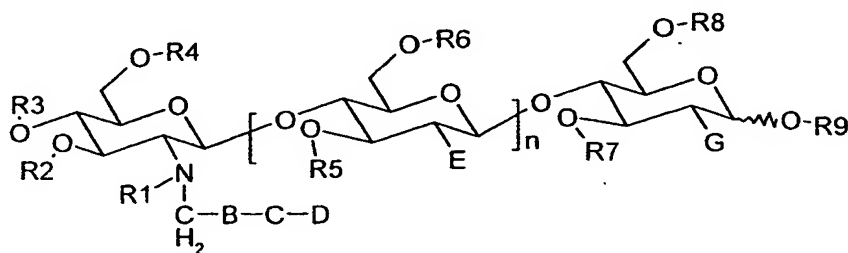
- ▶ n represents 2 or 3;
- ▶ C represents -O-;
- ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;

- ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-fucosyl.

12. The compound of formula (Ia) as claimed in any one of claims 7 to 11, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- ▶ B represents a phenylene;
- ▶ C represents  $-\text{O}-$ ;
- ▶ D represents a linear hydrocarbon-based chain containing 11 carbons, which is saturated, or unsaturated between carbons 4 and 5;
- ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-fucosyl.

13. The compound as claimed in claim 1 and of formula (Ib)



(Ib)

in which

- ▶ n represents 1, 2 or 3,
- ▶ B represents
  - an arylene;
  - a heteroarylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
  - a naphthylene;

- a heteronaphthylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
- a divalent radical derived from 2 fused aromatic rings containing 5 or 6 atoms each;
- 5     • a divalent radical derived from 2 fused aromatic or heteroaromatic rings containing 5 or 6 atoms each and comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
- a biphenylene;
- or a heterobiphenylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;

these groups possibly being substituted with one or two substituents  $R^{12}$  and  $R^{13}$  chosen, independently of each other, from halogen, CN,  $C(O)OR^{14}$ ,  $C(O)NR^{15}R^{16}$ ,  $CF_3$ ,  $OCF_3$ ,  $-NO_2$ ,  $N_3$ ,  $OR^{14}$ ,  $SR^{14}$ ,  $NR^{15}R^{16}$  and  $C_{1-6}$ -alkyl;

► C represents a substituent chosen from  $-O-$ ,  $-S-$ ,  $-CH_2-$ ,  $-CHR^{17}-$ ,  $-CR^{17}R^{18}-$ ,  $-NH-$  or  $-NR^{19}$ ;

► D represents a linear or branched, saturated or unsaturated hydrocarbon-based chain containing from 2 to 20 carbon atoms;

► E and G represent, independently of each other, a substituent chosen from H, OH,  $OR^{20}$ ,  $NH_2$ ,  $NHR^{20}$ ;

►  $R^1$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl,  $C(O)H$ , and  $C(O)CH_3$ ;

►  $R^2$ ,  $R^3$ , and  $R^6$  represent, independently of each other, a substituent chosen from H,  $C_{1-6}$ -alkyl,  $C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

►  $R^4$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl or  $R^{21}$ ;

►  $R^5$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, fucosyl or  $R^{22}$ ;

►  $R^7$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, arabinosyl or  $R^{23}$ ;

►  $R^8$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, fucosyl, methylfucosyl, sulfofucosyl, acetylfucosyl, arabinosyl,  $SO_3H$ ,  $SO_3Li$ ,  $SO_3Na$ ,  $SO_3K$ ,  $SO_3N(C_{1-6}alkyl)_4$  or  $R^{24}$ ;

►  $R^9$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, mannose, glycerol or  $R^{25}$ ;

►  $R^{10}$ ,  $R^{11}$ ,  $R^{17}$  and  $R^{18}$  represent, independently of each other, a substituent chosen from  $C_{1-6}$ -alkyl or F;

►  $R^{14}$ ,  $R^{15}$ ,  $R^{16}$  and  $R^{19}$  represent, independently of each other, a substituent chosen from H or  $C_{1-6}$ -alkyl,  $-C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

►  $R^{20}$ ,  $R^{21}$ ,  $R^{22}$ ,  $R^{23}$ ,  $R^{24}$  and  $R^{25}$  represent, independently of each other, a substituent chosen from  $C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

and also the possible geometrical and/or optical isomers, enantiomers and/or diastereoisomers, tautomers, salts, N-oxides, sulfoxides, sulfones, and metal or metalloid complexes thereof,



which are agriculturally acceptable. Among the compounds defined above, the most important compounds are the salts, more particularly the lithium, sodium, potassium or tetraalkylammonium salts.

14. The compound of formula (Ib) as claimed in claim 13, having one or other of the following characteristics, taken separately or in combination:

- ▶ n represents 2 or 3;
- ▶ B represents a phenylene;
- ▶ C represents -O-;
- ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{C(O)CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-fucosyl.

15. The compound of formula (Ib) as claimed in claim 13 or 14, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{C(O)CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-fucosyl.

16. The compound of formula (Ib) as claimed in any one of claims 13 to 15 simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{C(O)CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-fucosyl.

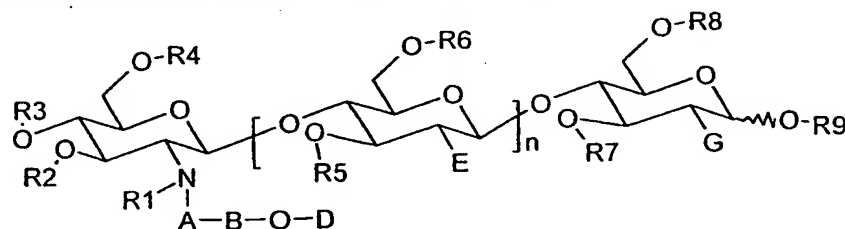
17. The compound of formula (Ib) as claimed in any one of claims 13 to 16 simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- ▶ C represents -O-;
- ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{C(O)CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-fucosyl.

18. The compound of formula (Ib) as claimed in any one of claims 13 to 17 simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- ▶ B represents a phenylene;
- ▶ C represents -O-;
- ▶ D represents a linear hydrocarbon-based chain containing 11 carbons, which is saturated, or unsaturated between carbons 4 and 5;
- ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{C(O)CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-fucosyl.

19. The compound as claimed in claim 1 and of formula (Ic)



(Ic)

in which

- n represents 1, 2 or 3;
- A represents a substituent chosen from -C(O)-, -C(S)-, -CH<sub>2</sub>-, -CHR<sup>10</sup>-, -CR<sup>10</sup>R<sup>11</sup>-, -C(O)O-, -C(O)S-, -C(S)O-, -C(S)S-, -C(O)NH-, -C(NH)NH- or -C(S)NH-;

- B represents

- an arylene;
- a heteroarylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
- a naphthylene;
- a heteronaphthylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
- a divalent radical derived from 2 fused aromatic rings containing 5 or 6 atoms each;
- a divalent radical derived from 2 fused aromatic or heteroaromatic rings containing 5 or 6 atoms each and comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
- a biphenylene;
- or a heterobiphenylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;

these groups possibly being substituted with one or two substituents R<sup>12</sup> and R<sup>13</sup> chosen, independently of each other, from halogen, CN, C(O)OR<sup>14</sup>, C(O)NR<sup>15</sup>R<sup>16</sup>, CF<sub>3</sub>, OCF<sub>3</sub>, -NO<sub>2</sub>, N<sub>3</sub>, OR<sup>14</sup>, SR<sup>14</sup>, NR<sup>15</sup>R<sup>16</sup> and C<sub>1-6</sub>-alkyl;

- D represents a linear or branched, saturated or unsaturated hydrocarbon-based chain containing from 2 to 20 carbon atoms;

- E and G represent, independently of each other, a substituent chosen from H, OH, OR<sup>20</sup>, NH<sub>2</sub>, NHR<sup>20</sup>;

- R<sup>1</sup> represents a substituent chosen from H, C<sub>1-6</sub>-alkyl, C(O)H, and C(O)CH<sub>3</sub>;

- R<sup>2</sup>, R<sup>3</sup>, and R<sup>6</sup> represent, independently of each other, a substituent chosen from H, C<sub>1-6</sub>-alkyl, C(O)C<sub>1-6</sub>-alkyl, -C(S)C<sub>1-6</sub>-alkyl, -C(O)OC<sub>1-6</sub>-alkyl, -C(O)NH<sub>2</sub>, -C(S)NH<sub>2</sub>, -C(NH)NH<sub>2</sub>, -C(O)NHC<sub>1-6</sub>-alkyl, -C(S)NHC<sub>1-6</sub>-alkyl or -C(NH)NHC<sub>1-6</sub>-alkyl;

- R<sup>4</sup> represents a substituent chosen from H, C<sub>1-6</sub>-alkyl or R<sup>21</sup>;

- R<sup>5</sup> represents a substituent chosen from H, C<sub>1-6</sub>-alkyl, fucosyl or R<sup>22</sup>;

- R<sup>7</sup> represents a substituent chosen from H, C<sub>1-6</sub>-alkyl, arabinosyl or R<sup>23</sup>;

- R<sup>8</sup> represents a substituent chosen from H, C<sub>1-6</sub>-alkyl, fucosyl, methylfucosyl, sulfofucosyl, acetylfucosyl, arabinosyl, SO<sub>3</sub>H, SO<sub>3</sub>Li, SO<sub>3</sub>Na, SO<sub>3</sub>K, SO<sub>3</sub>N(C<sub>1-8</sub>alkyl)<sub>4</sub> or R<sup>24</sup>;

- R<sup>9</sup> represents a substituent chosen from H, C<sub>1-6</sub>-alkyl, mannose, glycerol or R<sup>25</sup>;

- R<sup>10</sup>, R<sup>11</sup>, R<sup>17</sup> and R<sup>18</sup> represent, independently of each other, a substituent chosen from C<sub>1-6</sub>-alkyl or F;

►  $R^{14}$ ,  $R^{15}$ ,  $R^{16}$  and  $R^{19}$  represent, independently of each other, a substituent chosen from H or  $C_{1-6}$ -alkyl,  $-C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

►  $R^{20}$ ,  $R^{21}$ ,  $R^{22}$ ,  $R^{23}$ ,  $R^{24}$  and  $R^{25}$  represent, independently of each other, a substituent chosen from  $C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

and also the possible geometrical and/or optical isomers, enantiomers and/or diastereoisomers, tautomers, salts, N-oxides, sulfoxides, sulfones, and metal or metalloid complexes thereof, which are agriculturally acceptable. Among the compounds defined above, the most important compounds are the salts, more particularly the lithium, sodium, potassium or tetraalkylammonium salts.

20. The compound of formula (Ic) as claimed in claim 19, having one or other of the following characteristics, taken separately or in combination:

- n represents 2 or 3;
- A represents  $-C(O)-$  or  $-CH_2-$ ;
- B represents a phenylene;
- D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- E and G represent  $NHC(O)CH_3$ ;
- $R^1$  represents H,  $CH_3$  or  $C(O)CH_3$ ;
- $R^2$ ,  $R^3$ ,  $R^5$ ,  $R^6$ ,  $R^7$  and  $R^9$  represent H;
- $R^4$  represents H,  $C(O)CH_3$  or  $C(O)NH_2$ ;
- $R^8$  represents H,  $SO_3H$ ,  $SO_3Li$ ,  $SO_3Na$ ,  $SO_3K$ ,  $SO_3N(C_{1-8}alkyl)_4$ , fucosyl or methyl-fucosyl.

21. The compound of formula (Ic) as claimed in claim 19 or 20, simultaneously having the following characteristics:

- n represents 2 or 3;
- A represents  $-C(O)-$  or  $-CH_2-$ ;
- E and G represent  $NHC(O)CH_3$ ;
- $R^1$  represents H,  $CH_3$  or  $C(O)CH_3$ ;
- $R^2$ ,  $R^3$ ,  $R^5$ ,  $R^6$ ,  $R^7$  and  $R^9$  represent H;
- $R^4$  represents H,  $C(O)CH_3$  or  $C(O)NH_2$ ;
- $R^8$  represents H,  $SO_3H$ ,  $SO_3Li$ ,  $SO_3Na$ ,  $SO_3K$ ,  $SO_3N(C_{1-8}alkyl)_4$ , fucosyl or methyl-fucosyl.

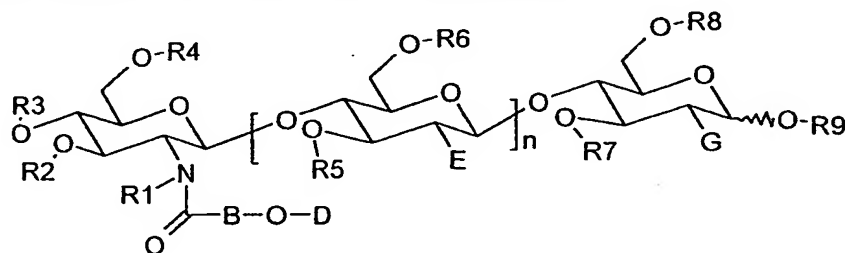
22. The compound of formula (Ic) as claimed in any one of claims 19 to 21, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- ▶ A represents -C(O)- or -CH<sub>2</sub>-;
- ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- ▶ E and G represent NHC(O)CH<sub>3</sub>;
- ▶ R<sup>1</sup> represents H, CH<sub>3</sub> or C(O)CH<sub>3</sub>;
- ▶ R<sup>2</sup>, R<sup>3</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>9</sup> represent H;
- ▶ R<sup>4</sup> represents H, C(O)CH<sub>3</sub> or C(O)NH<sub>2</sub>;
- ▶ R<sup>8</sup> represents H, SO<sub>3</sub>H, SO<sub>3</sub>Li, SO<sub>3</sub>Na, SO<sub>3</sub>K, SO<sub>3</sub>N(C<sub>1-8</sub>alkyl)<sub>4</sub>, fucosyl or methyl-fucosyl.

23. The compound of formula (Ic) as claimed in any one of claims 19 to 22, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- ▶ A represents -C(O)- or -CH<sub>2</sub>-;
- ▶ B represents a phenylene;
- ▶ D represents a linear hydrocarbon-based chain containing 11 carbons, which is saturated, or unsaturated between carbons 4 and 5;
- ▶ E and G represent NHC(O)CH<sub>3</sub>;
- ▶ R<sup>1</sup> represents H, CH<sub>3</sub> or C(O)CH<sub>3</sub>;
- ▶ R<sup>1</sup> represents H or CH<sub>3</sub>;
- ▶ R<sup>2</sup>, R<sup>3</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>9</sup> represent H;
- ▶ R<sup>4</sup> represents H, C(O)CH<sub>3</sub> or C(O)NH<sub>2</sub>;
- ▶ R<sup>8</sup> represents H, SO<sub>3</sub>H, SO<sub>3</sub>Li, SO<sub>3</sub>Na, SO<sub>3</sub>K, SO<sub>3</sub>N(C<sub>1-8</sub>alkyl)<sub>4</sub>, fucosyl or methyl-fucosyl.

24. The compound as claimed in claim 1 and of formula (Id)



(Id)

in which

- ▶ n represents 1, 2 or 3;
- ▶ B represents
  - an arylene;

- a heteroarylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
- a naphthylene;
- a heteronaphthylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
- a divalent radical derived from 2 fused aromatic rings containing 5 or 6 atoms each;
- a divalent radical derived from 2 fused aromatic or heteroaromatic rings containing 5 or 6 atoms each and comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
- a biphenylene;
- or a heterobiphenylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;

these groups possibly being substituted with one or two substituents  $R^{12}$  and  $R^{13}$  chosen, independently of each other, from halogen, CN,  $C(O)OR^{14}$ ,  $C(O)NR^{15}R^{16}$ ,  $CF_3$ ,  $OCF_3$ ,  $-NO_2$ ,  $N_3$ ,  $OR^{14}$ ,  $SR^{14}$ ,  $NR^{15}R^{16}$  and  $C_{1-6}$ -alkyl;

► D represents a linear or branched, saturated or unsaturated hydrocarbon-based chain containing from 2 to 20 carbon atoms;

► E and G represent, independently of each other, a substituent chosen from H, OH,  $OR^{20}$ ,  $NH_2$ ,  $NHR^{20}$ ;

►  $R^1$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl,  $C(O)H$ , and  $C(O)CH_3$ ;

►  $R^2$ ,  $R^3$ , and  $R^6$  represent, independently of each other, a substituent chosen from H,  $C_{1-6}$ -alkyl,  $C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

►  $R^4$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl or  $R^{21}$ ;

►  $R^5$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, fucosyl or  $R^{22}$ ;

►  $R^7$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, arabinosyl or  $R^{23}$ ;

►  $R^8$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, fucosyl, methylfucosyl, sulfofucosyl, acetylfucosyl, arabinosyl,  $SO_3H$ ,  $SO_3Li$ ,  $SO_3Na$ ,  $SO_3K$ ,  $SO_3N(C_{1-8}alkyl)_4$  or  $R^{24}$ ;

►  $R^9$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, mannose, glycerol or  $R^{25}$ ;

►  $R^{10}$ ,  $R^{11}$ ,  $R^{17}$  and  $R^{18}$  represent, independently of each other, a substituent chosen from  $C_{1-6}$ -alkyl or F;

►  $R^{14}$ ,  $R^{15}$ ,  $R^{16}$  and  $R^{19}$  represent, independently of each other, a substituent chosen from H or  $C_{1-6}$ -alkyl,  $-C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

►  $R^{20}$ ,  $R^{21}$ ,  $R^{22}$ ,  $R^{23}$ ,  $R^{24}$  and  $R^{25}$  represent, independently of each other, a substituent chosen from  $C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

and also the possible geometrical and/or optical isomers, enantiomers and/or diastereoisomers, tautomers, salts, N-oxides, sulfoxides, sulfones, and metal or metalloid complexes thereof, which are agriculturally acceptable. Among the compounds defined above, the most important compounds are the salts, more particularly the lithium, sodium, potassium or  
 5 tetraalkylammonium salts.

25. The compound of formula (Id) as claimed in claim 24, having one or other of the following characteristics, taken separately or in combination:

- ▶ n represents 2 or 3;
- 10 ▶ B represents a phenylene;
- ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{CH}_3$ ;
- 15 ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-fucosyl.

20 26. The compound of formula (Id) as claimed in claim 24 or 25, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{CH}_3$ ;
- 25 ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-fucosyl.

30 27. The compound of formula (Id) as claimed in any one of claims 24 to 26, simultaneously having the following characteristics:

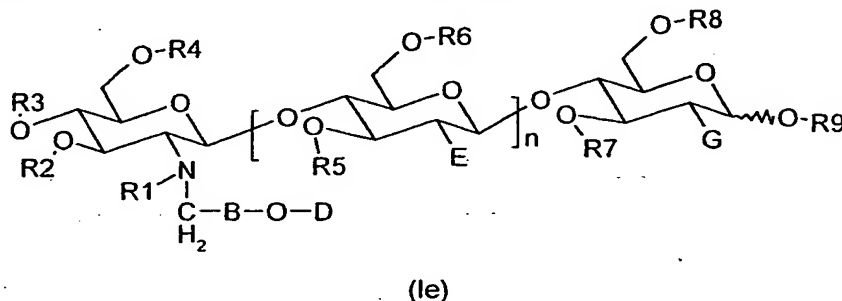
- ▶ n represents 2 or 3;
- ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- 35 ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;

►  $R^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-fucosyl.

28. The compound of formula (Id) as claimed in any one of claims 24 to 27, simultaneously having the following characteristics:

- $n$  represents 2 or 3;
- $B$  represents a phenylene;
- $D$  represents a linear hydrocarbon-based chain containing 11 carbons, which is saturated, or unsaturated between carbons 4 and 5;
- $E$  and  $G$  represent  $\text{NHC}(\text{O})\text{CH}_3$ ;
- $R^1$  represents H or  $\text{CH}_3$ ;
- $R^2$ ,  $R^3$ ,  $R^5$ ,  $R^6$ ,  $R^7$  and  $R^9$  represent H;
- $R^4$  represents H,  $\text{C}(\text{O})\text{CH}_3$  or  $\text{C}(\text{O})\text{NH}_2$ ;
- $R^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-fucosyl.

29. The compound as claimed in claim 1 and of formula (Ie)



in which

- $n$  represents 1, 2 or 3;
- $B$  represents
  - an arylene;
  - a heteroarylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
  - a naphthylene;
  - a heteronaphthylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
  - a divalent radical derived from 2 fused aromatic rings containing 5 or 6 atoms each;



- a divalent radical derived from 2 fused aromatic or heteroaromatic rings containing 5 or 6 atoms each and comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;
- a biphenylene;
- or a heterobiphenylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;

these groups possibly being substituted with one or two substituents  $R^{12}$  and  $R^{13}$  chosen, independently of each other, from halogen, CN,  $C(O)OR^{14}$ ,  $C(O)NR^{15}R^{16}$ ,  $CF_3$ ,  $OCF_3$ ,  $-NO_2$ ,  $N_3$ ,  $OR^{14}$ ,  $SR^{14}$ ,  $NR^{15}R^{16}$  and  $C_{1-6}$ -alkyl;

► D represents a linear or branched, saturated or unsaturated hydrocarbon-based chain containing from 2 to 20 carbon atoms;

► E and G represent, independently of each other, a substituent chosen from H, OH,  $OR^{20}$ ,  $NH_2$ ,  $NHR^{20}$ ;

►  $R^1$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl,  $C(O)H$ , and  $C(O)CH_3$ ;

►  $R^2$ ,  $R^3$ , and  $R^6$  represent, independently of each other, a substituent chosen from H,  $C_{1-6}$ -alkyl,  $C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

►  $R^4$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl or  $R^{21}$ ;

►  $R^5$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, fucosyl or  $R^{22}$ ;

►  $R^7$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, arabinosyl or  $R^{23}$ ;

►  $R^8$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, fucosyl, methylfucosyl, sulfofucosyl, acetylfucosyl, arabinosyl,  $SO_3H$ ,  $SO_3Li$ ,  $SO_3Na$ ,  $SO_3K$ ,  $SO_3N(C_{1-8}alkyl)_4$  or  $R^{24}$ ;

►  $R^9$  represents a substituent chosen from H,  $C_{1-6}$ -alkyl, mannose, glycerol or  $R^{25}$ ;

►  $R^{10}$ ,  $R^{11}$ ,  $R^{17}$  and  $R^{18}$  represent, independently of each other, a substituent chosen from  $C_{1-6}$ -alkyl or F;

►  $R^{14}$ ,  $R^{15}$ ,  $R^{16}$  and  $R^{19}$  represent, independently of each other, a substituent chosen from H or  $C_{1-6}$ -alkyl,  $-C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

►  $R^{20}$ ,  $R^{21}$ ,  $R^{22}$ ,  $R^{23}$ ,  $R^{24}$  and  $R^{25}$  represent, independently of each other, a substituent chosen from  $C(O)C_{1-6}$ -alkyl,  $-C(S)C_{1-6}$ -alkyl,  $-C(O)OC_{1-6}$ -alkyl,  $-C(O)NH_2$ ,  $-C(S)NH_2$ ,  $-C(NH)NH_2$ ,  $-C(O)NHC_{1-6}$ -alkyl,  $-C(S)NHC_{1-6}$ -alkyl or  $-C(NH)NHC_{1-6}$ -alkyl;

and also the possible geometrical and/or optical isomers, enantiomers and/or diastereoisomers, tautomers, salts, N-oxides, sulfoxides, sulfones, and metal or metalloid complexes thereof, which are agriculturally acceptable. Among the compounds defined above, the most important compounds are the salts, more particularly the lithium, sodium, potassium or tetraalkylammonium salts.

30. The compound of formula (Ie) as claimed in claim 29, having one or other of the following characteristics, taken separately or in combination:

- ▶ n represents 2 or 3;
- ▶ B represents a phenylene;
- ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- 5 ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{C(O)CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-
- 10 fucosyl.

31. The compound of formula (Ie) as claimed in claim 29 or 30, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- 15 ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{C(O)CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-
- 20 fucosyl.

32. The compound of formula (Ie) as claimed in any one of claims 29 to 31, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- 25 ▶ D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 3 to 17 carbon atoms;
- ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{C(O)CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- 30 ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-
- fucosyl.

33. The compound of formula (Ie) as claimed in any one of claims 29 to 32, simultaneously having the following characteristics:

- ▶ n represents 2 or 3;
- ▶ B represents a phenylene;
- ▶ D represents a linear hydrocarbon-based chain containing 11 carbons, which is saturated, or unsaturated between carbons 4 and 5;

- ▶ E and G represent  $\text{NHC(O)CH}_3$ ;
- ▶  $\text{R}^1$  represents H or  $\text{C(O)CH}_3$ ;
- ▶  $\text{R}^2, \text{R}^3, \text{R}^5, \text{R}^6, \text{R}^7$  and  $\text{R}^9$  represent H;
- ▶  $\text{R}^4$  represents H,  $\text{C(O)CH}_3$  or  $\text{C(O)NH}_2$ ;
- ▶  $\text{R}^8$  represents H,  $\text{SO}_3\text{H}$ ,  $\text{SO}_3\text{Li}$ ,  $\text{SO}_3\text{Na}$ ,  $\text{SO}_3\text{K}$ ,  $\text{SO}_3\text{N}(\text{C}_{1-8}\text{alkyl})_4$ , fucosyl or methyl-fucosyl.

34. The compound as claimed in any one of claims 1 to 33, for which

▶ B represents

- a naphthylene;
- an arylene;
- a heteroarylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur; or
- a heteronaphthylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;

these groups possibly being substituted with one or two substituents  $\text{R}^{12}$  and  $\text{R}^{13}$  chosen, independently of each other, from halogen, CN,  $\text{C(O)OR}^{14}$ ,  $\text{C(O)NR}^{15}\text{R}^{16}$ ,  $\text{CF}_3$ ,  $\text{OCF}_3$ ,  $-\text{NO}_2$ ,  $\text{N}_3$ ,  $\text{OR}^{14}$ ,  $\text{SR}^{14}$ ,  $\text{NR}^{15}\text{R}^{16}$  and  $\text{C}_{1-6}$ -alkyl.

35. The compound as claimed in any one of claims 1 to 34, for which

▶ B represents

- an arylene;
- or a heteroarylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;

these groups possibly being substituted with one or two substituents  $\text{R}^{12}$  and  $\text{R}^{13}$  chosen, independently of each other, from halogen, CN,  $\text{C(O)OR}^{14}$ ,  $\text{C(O)NR}^{15}\text{R}^{16}$ ,  $\text{CF}_3$ ,  $\text{OCF}_3$ ,  $-\text{NO}_2$ ,  $\text{N}_3$ ,  $\text{OR}^{14}$ ,  $\text{SR}^{14}$ ,  $\text{NR}^{15}\text{R}^{16}$  and  $\text{C}_{1-6}$ -alkyl.

36. The compound as claimed in any one of claims 1 to 35, for which

▶ B represents

- a phenylene;
- or a heterophenylene comprising 1 or 2 hetero atoms chosen from nitrogen, oxygen and sulfur;

these groups possibly being substituted with one or two substituents  $\text{R}^{12}$  and  $\text{R}^{13}$  chosen, independently of each other, from halogen, CN,  $\text{C(O)OR}^{14}$ ,  $\text{C(O)NR}^{15}\text{R}^{16}$ ,  $\text{CF}_3$ ,  $\text{OCF}_3$ ,  $-\text{NO}_2$ ,  $\text{N}_3$ ,  $\text{OR}^{14}$ ,  $\text{SR}^{14}$ ,  $\text{NR}^{15}\text{R}^{16}$  and  $\text{C}_{1-6}$ -alkyl.

37. The compound as claimed in any one of claims 1 to 33, for which

► B represents a substituent chosen from:

B1		B6		B11		B16	
B2		B7		B12		B17	
B3		B8		B13		B18	
B4		B9		B14		B19	
B5		B10		B15		B20	

in which  $R^{12}$  and  $R^{13}$  represent two substituents chosen, independently of each other,  
 5 from halogen, CN,  $CF_3$ ,  $OCF_3$ ,  $-NO_2$ ,  $N_3$ ,  $OR^{14}$ ,  $SR^{14}$ ,  $NR^{15}R^{16}$  and  $C_{1-6}$ -alkyl.

38. The compound as claimed in claim 37, for which B represents a phenylene B1 that may be substituted with one or two substituents  $R^{12}$  and  $R^{13}$  chosen, independently of each other, from halogen, CN,  $CF_3$ ,  $OCF_3$ ,  $-NO_2$ ,  $N_3$ ,  $OR^{14}$ ,  $SR^{14}$ ,  $NR^{15}R^{16}$  and  $C_{1-6}$ -alkyl.

39. The compound as claimed in one of the preceding claims, having one of the following characteristics, taken separately or in combination:

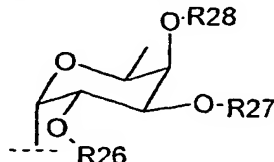
- $n_1 = 2$  or 3;
- A represents  $-C(O)-$  or  $-CH_2-$ ;
- C represents  $-O-$ ;
- E and G represent  $NHC(O)CH_3$ ;
- $R^1$  represents H or  $C(O)CH_3$ ;
- $R^2$ ,  $R^3$ ,  $R^5$ ,  $R^6$ , and  $R^7$  represent a hydrogen atom;
- $R^4$  represents a substituent chosen from H,  $C(O)CH_3$  and  $C(O)NH_2$ ;

- ▶  $R^8$  represents a substituent chosen from H, fucosyl, methylfucosyl, sulfofucosyl, acetylfucosyl, arabinosyl,  $SO_3H$ ,  $SO_3Li$ ,  $SO_3Na$ ,  $SO_3K$  and  $SO_3N(C_{1-8}alkyl)_4$ ;
- ▶  $R^9$  represents a hydrogen atom.

5 40. The compound as claimed in one of the preceding claims, having all of the following characteristics:

- ▶  $n = 2$  or  $3$ ;
- ▶ A represents  $-C(O)-$  or  $-CH_2-$ ;
- ▶ C represents  $-O-$ ;
- 10 ▶ E and G represent  $NHC(O)CH_3$ ;
- ▶  $R^1$  represents H or  $C(O)CH_3$ ;
- ▶  $R^2$ ,  $R^3$ ,  $R^5$ ,  $R^6$ , and  $R^7$  represent a hydrogen atom;
- ▶  $R^4$  represents a substituent chosen from H,  $C(O)CH_3$  or  $C(O)NH_2$ ;
- ▶  $R^8$  represents a substituent chosen from H, fucosyl, methylfucosyl, sulfofucosyl, acetylfucosyl, arabinosyl,  $SO_3H$ ,  $SO_3Li$ ,  $SO_3Na$ ,  $SO_3K$  or  $SO_3N(C_{1-8}alkyl)_4$ ;
- 15 ▶  $R^9$  represents a hydrogen atom.

41. The compound as claimed in one of the preceding claims, for which  $R^8$  represents H,  $SO_3H$ ,  $SO_3Li$ ,  $SO_3Na$ ,  $SO_3K$ ,  $SO_3N(C_{1-8}alkyl)_4$  or a substituent of formula:



20 in which

- ▶  $R^{26}$  represents a substituent chosen from H and  $CH_3$ ;
- ▶  $R^{27}$  and  $R^{28}$  represent, independently of each other, a substituent chosen from H,  $C(O)CH_3$ ,  $SO_3H$ ,  $SO_3Li$ ,  $SO_3Na$ ,  $SO_3K$  and  $SO_3N(C_{1-8}alkyl)_4$ .

25 42. The compound as claimed in claim 41, for which  $R^{26}$ ,  $R^{27}$  and  $R^{28}$  represent a hydrogen atom.

30 43. The compound as claimed in one of the preceding claims, for which D represents a linear, saturated or unsaturated hydrocarbon-based chain containing from 7 to 15 carbon atoms.

44. The compound as claimed in one of the preceding claims, for which D represents a hydrocarbon-based chain according to one of the formulae represented below

D1		D4	
D2		D5	
D3		D6	

in which

- ▶  $m = 1$  to  $12$
- ▶  $p = 0$  to  $11$
- ▶  $q = 6$  to  $14$
- ▶  $s = 5$  to  $13$

with  $m+p \leq 12$  and  $m+p \geq 4$ .

45. The compound as claimed in one of the preceding claims, for which D represents a hydrocarbon-based chain according to one of the formulae represented below

D1	
D2	
D3	

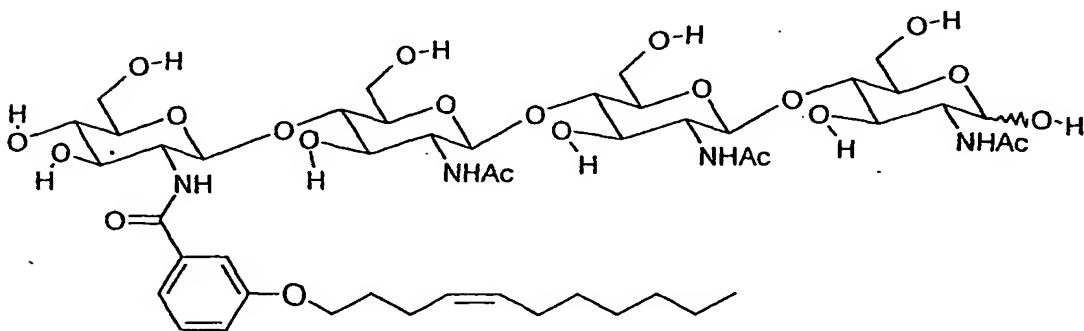
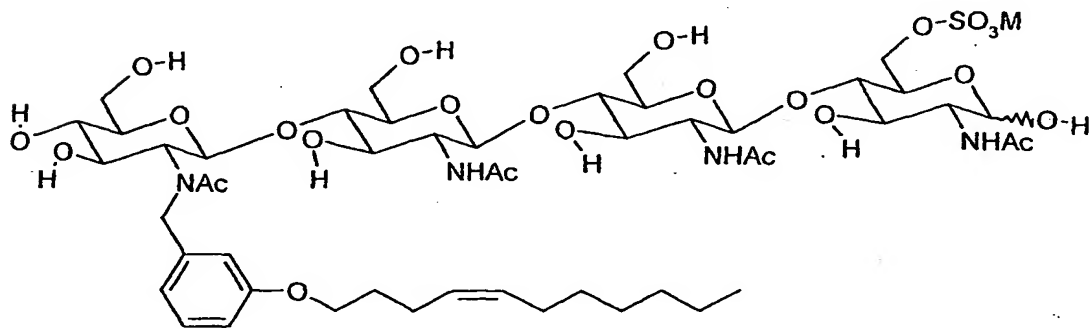
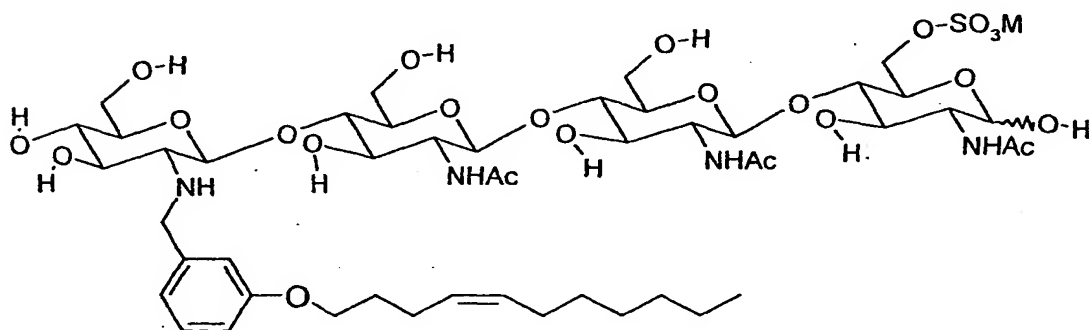
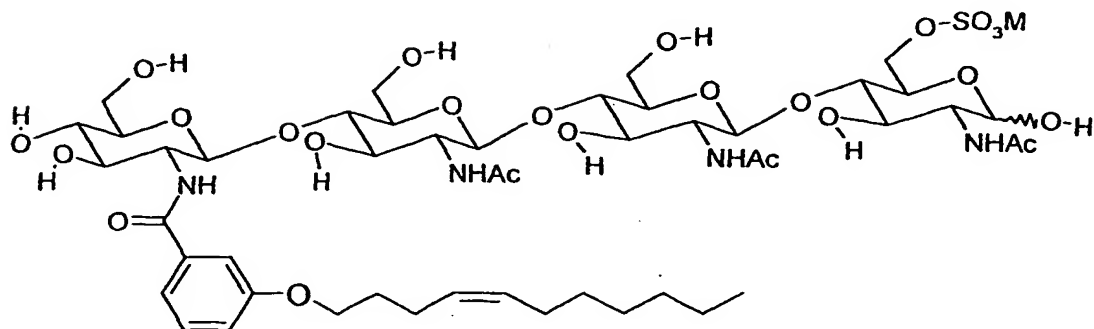
in which

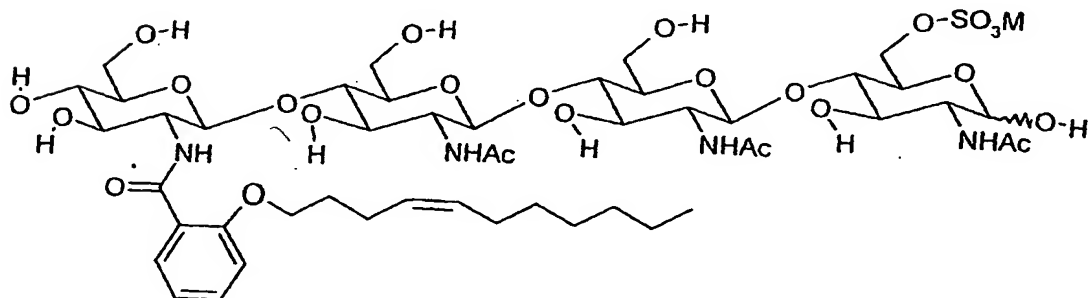
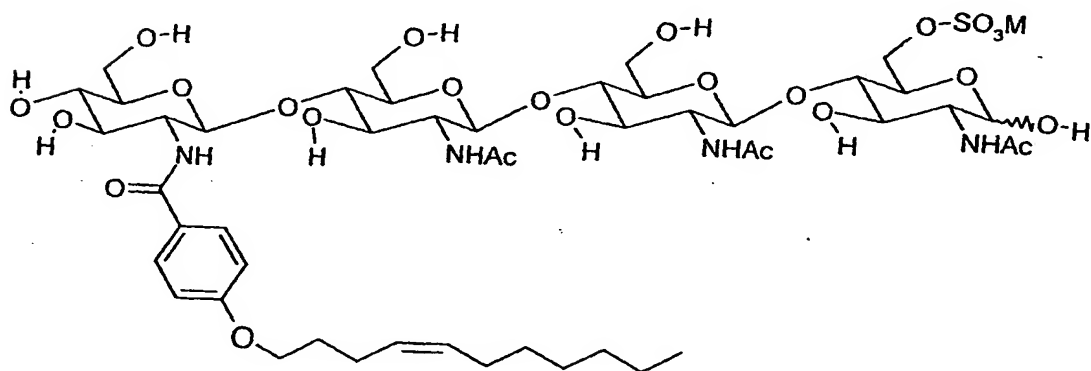
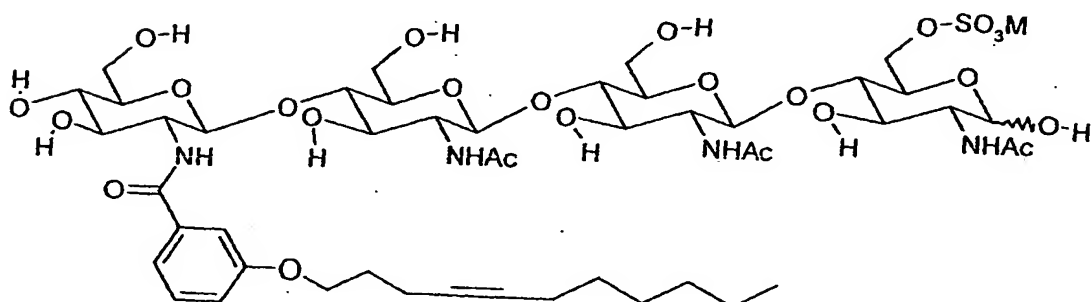
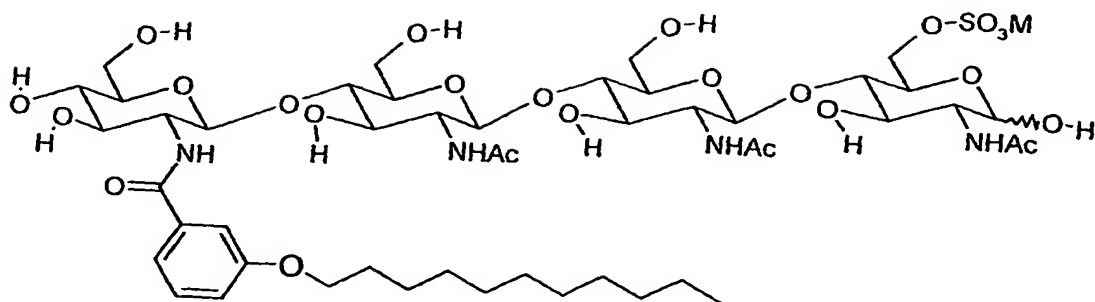
- ▶  $m = 1$  to  $12$
- ▶  $p = 0$  to  $11$
- ▶  $q = 6$  to  $14$

with  $m+p \leq 12$  and  $m+p \geq 4$ ;

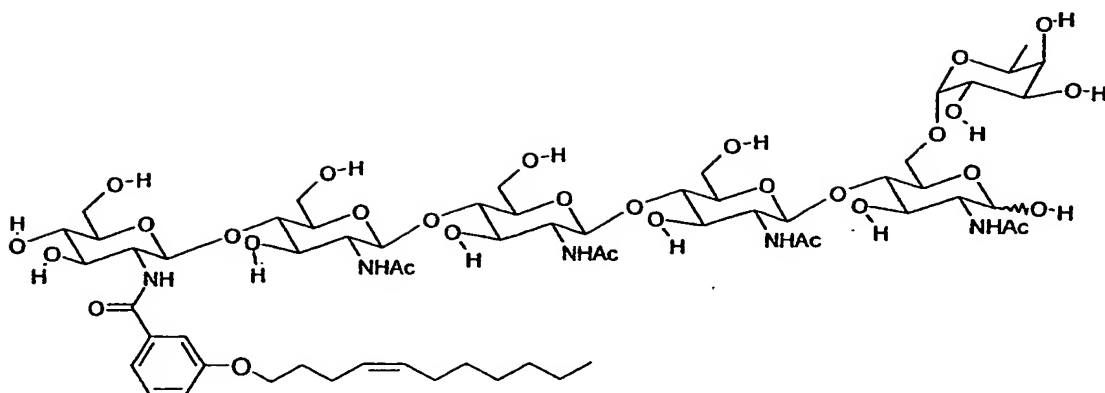
46. The compound as claimed in one of the preceding claims, for which D represents a linear hydrocarbon-based chain containing 11 carbon atoms, which is saturated, or unsaturated between carbon atoms 4 and 5.

47. The compound as claimed in one of the preceding claims, corresponding to one of the following formulae:









in which, when it is present, M represents a cation chosen from  $H^+$ ,  $Li^+$ ,  $Na^+$ ,  $K^+$  and  $(C_{1-8}alkyl)_4N^+$ .

5

48. The use of a compound as claimed in any one of claims 1 to 47, as a nodulation factor for a plant.

49. The use as claimed in claim 48, characterized in that said plant is a legume.

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50. The use as claimed in claim 49, characterized in that said legume is soybean, pea, horse bean, groundnut, bean, lupin, alfalfa or clover.

51. The use of a compound as claimed in any one of claims 1 to 47, as a plant growth stimulation factor

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52. A process for treating seeds, comprising the application, alone or as a combination with other active molecules, of one or more compound(s) as defined in any one of claims 1 to 47.